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CLAIM

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1. An induction heating coil apparatus for plate including a main coil of an orthogonal magnetic-flux type, which extends so as to exceed width of a long plate to be transferred along a transfer line in a width direction and in which a plurality of pairs of main coil conductivities are arranged in a longitudinal direction of the plate, the plate being sandwiched between the pair of main coil conductivities opposite to each other, and an auxiliary coil of an orthogonal magnetic-flux type, which extends in a longitudinal direction of a plate inside both side edges directed in the wide direction of the plate and in which at least one set of two pairs of auxiliary coil conductivities are arranged in the longitudinal direction, the plate being sandwiched between the two pairs of auxiliary coil conductivities opposite to one another, wherein the main coil and the auxiliary coil are arranged along the transfer direction of the plate and are connected to power supply with a high or medium frequency, characterized in that:

said auxiliary coil is arranged within an interval other than an interval in which a connection conductivity for connecting said main coil conductivities to each other forms a closed loop, and

a pitch between the main coil conductivities is changed in the longitudinal direction of the plate within the interval of the closed loop.

Symbol

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1 -- plate; 2, 4 -- power supply; 21a-21f, 30a-30l, and 37a-37f --
main coil conductivity; 23, 28, and 35 -- main coil; 24, 29, 36 --
auxiliary coil; 25a, 25b, 32a, 32b, and 39a-39d -- auxiliary coil
conductivity; 41 -- long hole; 42 -- bolt; and W -- plate width; P1-
P6 -- pitch.

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